

THE FAUNA OF THE DARBHANGA DISTRICT, NORTH BIHAR

By

C. M. INGLIS, F.Z.S., F.E.S., M.B.O.U.

In Vol. XIII. p. 621 and subsequent numbers I published a list of the "Birds of Madhubani Sub-division of the Darbhanga District" and from time to time added the occurrence of new species and notes on the rarer species got in other parts of the district, so that the whole comprised a fairly accurate account of the birds of the whole district. Since then I have pretty well worked out the butterflies and dragonflies and also done something in the mammals. N. A. Baptista, one of the Society's Mammal Survey collectors, has also collected here, under my supervision, for a short time, and with the help of this collection, my own observations, and some notes by Mr. G. Dalgleish in the "Zoologist," I hope to be able to give a fairly good list of those. My brother, Mr. H. A. Inglis, has worked out the fishes and is at present engaged on the Hymenoptera Aculeata, Rhynchota and some families of the Coleoptera, and lists of these, I hope, will be published later on. I also think it may be advisable to collect together my scattered notes on the birds and give a resume of the same, also adding any further notes which I have got.

My brother and myself have to thank Mr. Bainbrigg Fletcher and his assistants at Pusa for their most valuable help in the identification of species and for their kind encouragement, without which these papers on insects could never have been published.

Our collecting has been confined to a comparatively small area, but I doubt whether much more would be added had we had opportunities of collecting further afield.

In my former paper on the birds, Mr. H. W. P. Scroope, our present Commissioner and a keen ornithologist, kindly helped me with a short account of the general features of the Madhubani sub-division, and I now propose, with the help of the Gazetteer, to give a short description of the district as a whole. When the Gazetteer was published in 1907, this district was included in Bengal, but it now forms part of the new Province of Bihar and Orissa.

According to the Gazetteer: "The district of Darbhanga.....lies between 25° 28' and 26° 40' north latitude and between 85° 31' and 86° 41' east longitude. It contains a total area of 3,348 square miles, and it is thus very much larger than any county in England or Ireland, except Yorkshire.....its greatest length from north-east to south-west is 96 miles....."

"The district is bounded on the north by Nepal, on the east by the district of Bhagalpur, on the west by Muzaffarpur, on the south-east by the district of Monghyr, and on the south-west by the Ganges which divides it from the Patna District.....The district formerly constituted part of Tirhut, a huge unwieldy district extending over 6,343 square miles; but this vast extent of territory, being beyond the administrative capacity of a single Collector, it was divided into two in 1875, the western portion being constituted the district of Muzaffarpur and the eastern and larger portion being formed into a separate district called Darbhanga after the name of its head-quarters. The name Tirhut is still, however, used as a convenient appellation for the country included in these two districts. (Tirhut has now been made a Division, C. M. I.)

"Darbhanga is a great alluvial plain with a general slope from north to south varied by a depression in the centre.....The country lies on a low level, in many places identified with chains of shallow marshes....The rivers flow on raised beds, which they have gradually constructed for themselves out of the silt brought down from the mountains in Nepal. The alluvial plain diversified only by these river ridges, is rich in all sorts of crops. In some tracts nothing but an

enormous stretch of rice-fields meets the eye, but in others the level plain is dotted with numerous clusters of bamboos and groves of mango and *sisso* trees.

"The district contains three main river systems—the Ganges, the Little Gandak, and the Kamla-Tiljuga group of rivers. The Ganges forms part of the southern boundary of Darbhanga and further north the Little Gandak separates the greater portion of the Samastipur sub-division from the rest of the district....to the north there is a network of rivers and streams called the Kamla-Tiljuga group, most of which converge on the south-east corner of the district. In the Madhubani and headquarters sub-divisions, practically all the rivers are liable to overflow their banks during heavy floods, but they rapidly drain off into the low-lying country in the south-east of the district, on which all the lines of drainage north of the Little Gandak converge. The most marked characteristic in this portion of their course is that they flow on ridges elevated above the surrounding country, and each pair of rivers thus encloses a shallow depression, consisting of a series of *chaurs* or low-lands leading into one another and forming the drainage channels of the country."

The Ganges is of course the largest river in the district and its channel, except when in flood, is usually about a mile broad. The Little Gandak rises in Nepal near Sumeswar, enters the district near Pusa and, flowing in a south-westerly direction, joins the Ganges below Monghyr. The Bagmati likewise has its source in Nepal, near Katmandu, takes a south-easterly course and joins the Little Gandak near Rusera. The Karai issues from the Kamla and Bagmati and runs into the Tiljuga at Tilakeswar. The Kamla flows south from Nepal through the Madhubani sub-division, where its old beds are scattered all over the country, past Darbhanga and then takes a south-easterly direction to the Ganges. The Tiljuga also rising in Nepal skirts the eastern boundary of the district. This river and the Kamla converge at Tilakeswar in the Rusera thana "and are thenceforward known indiscriminately by either name, while proceeding through Monghyr and Bhagalpur to join the Ganges and the Kosi by various tortuous courses."

There are no forests in the district but in some parts there are some uncultivated lands with bushes such as Ber (*Zizyphus jujuba*), etc., there are also patches of grassland, of various extent, used for thatching purposes, the largest of those being generally interspersed with Khair (*Acacia catechu*) and *sisso* (*Dalbergia sissoo*).

Round the villages are mango groves and bamboos and in some places, especially where there are Mahomedans, Palmyra (*Borassus flabelliformis*) and Date palms (*Phoenix sylvestris*).

The land is highly cultivated, the principal crops grown being rice, wheat, barley, oats, millets, maize, pulses, tobacco and chillies and, of late years owing to the erection of several large sugar mills, sugarcane is also grown to a large extent. Indigo is grown by the European planters, but not to such a large extent as formerly.

Although essentially a rural district, it is fairly densely populated, according to the Gazetteer the pressure on the soil being 870 to the square mile. There are only four towns—Darbhanga with its suburb Laheria Sarai, Samastipur, Madhubani and Rusera. Pusa is also now an important centre having the Agricultural Research Institute there. It is a pretty place with some fine teak and *sisso* avenues.

The climate is healthy and during the cold weather is especially good. During the hot months, dry west winds are prevalent which parch the land. "The mean maximum temperature ranges from 73° in January to 96° in April and May. The mean minimum temperature varies from 52° in January to 80° in July. The highest recorded temperature being 107° in 1894 and the lowest 38° in January 1878." The average rainfall according to the Gazetteer is 49.77 inches.

The present paper is on the dragonflies. I have to thank Major F. C. Fraser, I.M.S., for kindly identifying many specimens and for supplying some interesting notes which are given under his initials F. C. F.; he has also sent me a "Revised list of Indian Odonata," the classification of which is followed. Mr. Bainbrigge Fletcher, besides assisting largely in identifications, has kindly contributed some notes on the various species which appear under the initials T. B. F. I have also been fortunate in having had on several occasions access to the Odonata collection at Pusa and have thus been able to add some data from it.

ORDER. ODONATA.

SUBORDER. ANISOPTERA.

FAMILY. Libellulidae.

1. *Potamarcha obscura*, Ramb. ..Noticed from 17th June to 16th November. Commonly seen on a pipal tree in the garden. [Common at Pusa during the rains and very fond of resting on electric wires.—T.B.F.]
2. *Orthetrum tæniolatum*, Schn. The only specimen was got on 4th November 1920.
3. *Orthetrum sabina*, Dru. ..Seen from April to the end of December. Common both over water and dry land.
4. *Orthetrum pruinosum neglectum*, Ramb. I have only once taken this here. It was got on 14th November 1921, whilst sitting on a shrub on the spoil bank of my tank. Mr. Fletcher has not got it at Pusa.
5. *Palpopleura sexmaculata*, Fabr. I have never come across this here, but one was got at Pusa on 10th January 1905.
6. *Æisoma panorpoides panorpoides*, Ramb. Got from 16th to the end of March, again from 7th April to the end of October. Found both round the edges of water and over dry land.
7. *Brachydiplax sobrina*, Ramb. Captured on 3rd May and from July to 27th October. Especially common in September. Got in dry paddy land, along hedges, etc. [At Pusa common in gardens during the rains, being most abundant about the beginning of August.—T.B.F.] [I have never seen this species away from water and am surprised to note the situations mentioned by you.—F.C.F.]
8. *Diplacodes trivialis*, Ramb. ..Noted on 25th March, 7th April, 15th May and from August to 16th November. Seen flying low over dry ground and sometimes over paddy lands.
9. *Diplacodes nebulosa*, Fb. ..Found all the year round. I have taken it at light in March. In habit it is much the same as *trivialis* but perhaps frequents water more than that species. [I agree with you that it is more generally seen near water; *D. trivialis* more generally over dry land.—F.C.F.]
10. *Rhodothemis rufa*, Ramb. ..Rather uncommon. I have taken them as follows: on 18th March, 3rd May and from 27th July till 6th November. The

- commonest place to find them here is on the spoil bank of my tank, where there are a number of bushes. It is usually seen singly or in pairs. [I have taken this at Gauhati and Shillong, but have never seen it at Pusa.—T.B.F.]
11. *Neurothemis tullia tullia*, Dm. Got from 11th March to the middle of April: one was captured on 1st July and others seen from August to 10th December. Commonly got in gardens and where there is jungle and also in paddy lands. I have sometimes noticed nothing but males, in fact it was some time before I secured females.
 12. *Neurothemis intermedia intermedia*, Ramb. Two specimens taken at Baghownie in May on 8th September 1922. Probably occurs more commonly but is overlooked.
 13. *Crocothemis servilia servilia*, Dru. Seen from January to the end of June. I seem to have only noted down one in July (14th) and again from August to the end of December. Seen everywhere, in gardens, over water generally in numbers.
 14. *Brachythemis contaminata*, Fb. I have got this on 4th and at the end of March and from 7th April to 24th November. It is very common both over water and dry land, flying very low and in some numbers. This was very commonly seen while boating over a flooded area during the rains. [Abundant at Pusa throughout the warmer part of the year. Never seen away from the river.—T.B.F.].
 15. *Tritthemis aurora aurora*, Burm. I got a male on 20th June 1922, and specimens got at Pusa are dated 28th March 1919 and 30th December 1919.
 16. *Tritthemis pallidinervis*, Kby. This is common. I have taken one on 14th January and on 18th and 21st February, all through March, also on 2nd, 29th and 30th May and again from 29th July to 20th December. I have captured them "in cop" during August and October. It is often found near water but also got flying over dry land. Whilst boating during a flood it was very commonly seen flitting about and perching on grass and crops that were partially submerged. [Abundant throughout the warmer part of the year. Often seen in large numbers, thousands in one place. Common in gardens away from water.—T.B.F.]
 17. *Rhyothemis variegata*, Joh. . . The earliest were seen on 21st March up to the middle of April and from May to the middle of July and from September to the middle of November. Sometimes solitary specimens are seen flitting slowly about, but often are together in a regular swarm, very commonly over dry land.

18. *Pantala flavescens*, Fb. .. Found from June to the end of September. One was got on 17th October. Often seen flitting slowly about in groves in some numbers.
19. *Tramea basilaris burmeisteri*, Kby. The only specimens got by me were caught in my garden on 27th March and 13th November 1921 and on 22nd July 1922. At Pusa they were got on 15th December 1912 and 19th August 1915. [Not uncommon at Pusa from August to October.—T.B.F.]
20. *Tholymis tillarga*, Fb. .. Got from July to 8th November. Seen during the day in groves, and in gardens and over water in evenings till quite late. While sleeping in the verandah during the rains I have often, on awakening early in the morning before sunrise, seen numbers of them flitting about evidently hawking mosquitos just beyond it. The opalescent patch on the hind-wing of the male is very striking. [Goes well into the cold weather. In December and January, when the mornings and evenings are chilly and probably few flies about, I have seen them hawking prey in the bright sunshine quite late in the forenoons. An abundant species at Pusa.—T.B.F.]
21. *Zygomma petiolatum*, Ramb. I got a male on 28th June 1922 and Mr. Fletcher got one in his verandah at Pusa on the evening of 28th June 1921; just exactly a year previous to mine.
22. *Aethriamanta brevipennis*
brevipennis, Ramb. Obtained from July to middle of August. Mr. Fletcher wrote to me that it was "scarce at Pusa and only got once there on 19th July 1920." It is here to be seen flying low over dry ground, often dry paddy land; not many seen together, only perhaps two or three.
23. *Urothemis signata signata*, Ramb. Specimens were got as follows: a few towards the end of March, one on 7th April, during the whole of May, one on 8th June and from July to 14th December. On 9th July I got one at light. This is common both flying over dry land and water, in gardens, etc., in some numbers; they sometimes fly at a considerable height.

SUBFAMILY. *Cordulinae*.

24. *Azuma frontalis*, Selys. .. Only one specimen got here. It was caught while hawking over my tank on 10th November 1920.
25. *Azuma cyanocephala*, Hagen. Two specimens got at Baghownie on 4th and 31st October 1922. They were hawking over dry land.

FAMILY. *Aeschnidae*.SUBFAMILY. *Aeschninae*.

26. *Heminax ephippiger*, Burm. I have only procured two specimens, one of which was taken at light on 6th July 1920 and the other on 5th August 1922 while flying in the garden during the day. It was near a shrubbery from which it had presumably been disturbed. Mr. Fletcher got one at light at Pusa on 5th August 1920 and a female, also at light, on 16th July 1922, and there is another at Pusa, dated 10th July 1915. Mr. Fletcher wrote to me on 2nd August 1922: "*Heminax* was very common here yesterday evening in my garden, more than a dozen flying about round the bungalow, but all twenty feet or more up and I could not capture any. The only two I have ever caught here have been at light. Probably they hide in bamboo clumps or bushes in the daytime and could be caught then." [I have also seen what I take to be this species hawking about in the late evening from March onwards.—T.B.F.]
27. *Anax parthenope parthenope* Selys. [One specimen in the Pusa collection labelled as having been taken in a rice-field at Pusa on 9th July 1906.—T.B.F.]
28. *Anax guttatus*, Burm. ..I first came across this during 1921. The first pair were got in a field of *rahar* (*Cajanus indicus*) at Bunhar, a factory close to here, on 22nd September. I secured another specimen in my garden on 3rd November and again saw it also in my garden on 31st October and during the first few days of November. I saw another one at Bunhar on 6th December. Except for the two got together at Bunhar I have only seen single insects and they used to frequent the garden from 11 a.m. till 2 p.m. flying fast and pretty high up. I made several unsuccessful shots at them, but after leaving the place they generally returned. During the few days I noticed them, they kept the same beat and the single insect was certain to be found between the above-mentioned hours. Mr. Fletcher wrote to me on 22nd November 1921: "I picked up a recently-dead male on the road here a few days ago and saw another flying about near Waini." I saw one in my garden about 11 a.m. on 11th July 1922 but failed to catch it. [I think there is no doubt but that we had a local immigration of *A. guttatus* into the Darbhanga

district in 1921. Otherwise, it is incredible that so large and distinct an insect should have escaped observation at Pusa during the last sixteen years.—T.B.F.]

29. *Gynacantha bainbriggei*, Fraser. There are specimens in the Pusa collection got there on 17th June and 31st July 1916. I have never come across it here. The identity of this insect was doubtful, but Major Fraser writes me that it is undoubtedly *G. bainbriggei*. [More often seen hawking about in the evening than caught.—T. B. F.]

SUBFAMILY. *Gomphine*.

30. *Ictinus rapax*, Ramb. . . I have got this on 20th March and from 23rd May to 29th October. It is the only common large dragonfly found here and during the rains is commonly seen flying over water, but it is also got over dry lands, in gardens ; sometimes flying at a considerable height.
31. *Ictinus clavatus*, Selys . . [One specimen at Pusa on 12th July 1915—T.B.F.] Mr. Fletcher thinks the identification may be doubtful and Major Fraser wrote to me that this species had not yet been procured in India. [This specimen was named *clavatus* by Major Fraser. I cannot see that it differs from *rapax* and presume that the name *clavatus* was a *lapsus calami*.—T.B.F.] [I have since come on my notes and a good sketch of the Pusa specimen, I evidently identified it by Williamson's key, but on looking up, Selys I find that the description does not agree in several details, and it is doubtless (*Ictinus atrox*, Selys)—F.C.F.]
32. *Gomphidia T-nigrum*, Selys. . The single specimen got here was caught on 5th November 1920. Mr. Fletcher wrote that he had not got it at Pusa.
33. *Onychogomphus lineatus*, Selys. I have never found this here. There is a specimen in the Pusa collection got there on 10th March 1920.
34. *Anormogomphus heteropterus*, Major Fraser writes he has a specimen from Bihar, but does not mention the locality. There are no specimens in the Pusa collection nor have I ever come across it. [I can find no mention of the locality of my specimen except in my own handwriting which say "Bihar" Possibly I received it from Fletcher in the early days when he first started sending me specimens. It is a teneral ♂, I have no doubt that the locality is correct. They are very small and colourless insects and might be difficult to spot.—F. C. F.]

35. *Platygomphus dolobratrus*, I have only got three, all females, on 14th July and on 13th and 30th August 1922. It is got at Pusa from the end of June through July and August. Mr. Fletcher informs me that it likes thick canna beds. [Usually quite common at Pusa in July and August: It is curious that its distribution seems to be so local.—T.B.F.]
36. ..A *Gomphine* female was got here on 27th June 1922, which Mr. Fletcher wrote was new to him; so far it remains unidentified.

SUBORDER. ZYGOPTERA.

FAMILY. *Cænagrionidæ*.SUBFAMILY. *Lestinæ*.

37. *Lestes umbrina*, Selys, ..I have got it here on 18th May and 11th August 1921 and there are specimens in the Pusa collection got there on 30th December 1919 and 18th October 1920.
38. *Lestes viridula*, Ramb. ..A common species found from August to 24th November. During indigo manufacture this is often seen hawking along the masonry walls of the vats. [One species of *Lestes* is common at Pusa in November, being found amongst bushes in gardens but I am not certain of its specific identity.—T.B.F.]
39. *Lestes nigriceps*, Fraser, M. S. There is a *Lestine* got at Pusa from June to August and I got one here on 18th June 1922. Mr. Fletcher writes: "The fresh adult male has a blue spot on neck and blue tail." He has sent some to Major Fraser for determination. [The new *Lestine* I am calling *L. nigriceps*.—F.C.F.]

SUBFAMILY. *Cænagrioninæ*.

40. *Agriocnemis pygmaea*, Ramb. Common and got on the following dates:—The whole of January and June, 1st July. On 30th September a pair were got "in cop.;" also all through October during which month several pairs were got "in cop.;" as also during November and from then others were secured up to the end of December.
41. *Agriocnemis incisa*, Selys. ..Apparently uncommon. A pair were got "in cop." on 11th October 1920 and another one was caught on 5th August 1921.
42. *Agriocnemis lacteola*, Selys ..This also appears to be rare, the only specimen being got on 12th June 1921.
43. *Ceriagrion coromandelianum*, A very common species got as follows:—
Fb. 14th January; from February to the middle of June and from July to the end of December. I got a specimen with

- red mites at the bases of the wings. I thought it was a different species till Mr. Fletcher pointed out to me that the red was due to mites. [Abundant in gardens in March. Less common later on. Very subject to the attacks of a red mite, so that the whole base of all the wings often looks bright red.—T.B.F.]
44. *Ceriagrion rubicæ*, Laid .. Apparently rare here, the only specimens being got on 22nd July 1920, 22nd August 1920 and 28th June 1921. [Not taken at Pusa. Perhaps passed over as *coromandelianum*.—T.B.F.]
45. *Ceriagrion cerinorubellum*, Selys. I got one on 28th October 1921 and another on 13th July 1922. [Not seen at Pusa. In Assam I have taken it over weedy ponds.—T.B.F.]
46. *Aciagrion pallidum*, Selys .. I have got this all through October, on 1st and 30th November and on 7th December. [An autumnal species at Pusa as elsewhere, going well into the cold weather. Common in November and found even in December.—T.B.F.]
47. *Pseudagrion decorum*, Ramb. This was got from 11th February to 5th March; on 29th June and from 20th August to the end of the month, also on the following scattered dates: 3rd October, 24th November and 30th December. Specimens were taken at Pusa on 30th December 1919, 26th March 1920 and 2nd April 1920.
48. *Pseudagrion microcephalum*, Ramb. The dates of the capture of this are 21st February, 4th March, 4th and 16th August, 20th October when a pair were got "in cop" and 17th December. There are specimens taken at Pusa on 26th March and 30th December.
49. *Pseudagrion bengalense*, Laid. I have got this species here on the following dates:—20th March, 20th July, 20th August, 12th and 17th October and from the 1st to the 5th November.
50. *Pseudagrion hypermelas*, Selys. Apparently uncommon here as I have only secured specimens on 1st October, 7th November and 31st December 1920.
51. *Pseudagrion laidlawi*, Fraser. I have got this from 6th to 24th November and on 18th December 1921. A single specimen was got on 30th October 1920 at Pusa by Mr. Fletcher.
52. *Pseudagrion spencei*, Fraser .. A common species here. I have got it on the following dates:—9th to 25th January, 3rd, 5th and 26th March, 2nd and 8th July, 4th to 8th August, throughout October and November and from 2nd to 21st December. I got it "in cop." on 29th October. Pusa specimens were dated 6th and 9th February.

53. *Pseudagrion rubriceps*, Selys. I have got this on the following dates :—
19th January, 20th June, 8th to 13th August, 12th September, through October on 27th and 28th November and on 21st-28th December. There are specimens in the Pusa collection taken there on 9th February 1920, 17th March 1920 and 30th December 1919. I got it "in cop" on 9th October. [Common throughout the year. Never found away from the river.—T.B.F.]
54. *Ischnura aurora*, Brauer. . . Common specimens were seen and got all through January and February from 4th-12th March, during April, on 28th June, 22nd July, all through October, on 25th November and throughout December.
55. *Ischnura senegalensis*, Ramb. Specimens were secured on the following dates :—27th December 1920, 2nd January, 8th February, 3rd and 4th March 1921 and on 2nd January and 5th February 1922. Mr. Fletcher remarks that it is very curious that all our specimens are either very teneral or females. We have never got males.
56. *Ischnura rufostigma*, Selys . . Rare, I have got this on 14th April 1920, on 29th January and 2nd and 17th February 1922. A specimen in the Pusa collection was got there on 3rd May 1918.
57. *Rhodischnura nursei*, Morton. This species was found throughout January and February and from 3rd to 12th March, 13th April, 2nd-18th June, 11th August, in September, on 5th, 6th, 29th and 30th October in November and from 19th December to the end of the month. I got a pair "in cop." at Bunhar on 7th June. At Pusa it has been got on 19th February 1919, and during March. In June it was common along the Bagmati where there were rushes but I have also got it over dry land.
58. *Enallagma parvum*, Selys . . This was obtained on the following dates :—
All through February, 10th April, 13th May, 3rd July when a pair were got "in cop.", 21st August, all through September and October, on 15th and 18th November and on 12th and 14th December. Pusa specimens were got during March and December. [Abundant in gardens throughout the warmer part of the year.—T.B.F.]
59. *Cænagrion dyeri*, Fraser . . I have only taken three specimens on 19th February and 1st March 1921 and on 12th January 1922. This is a rare species.

(To be continued.)